

Title (en)

Scratch protection in tape data storage system

Title (de)

Kratzschutz in einem Magnetbandspeichersystem

Title (fr)

Protection contre des rayages dans un système de stockage sur bande

Publication

**EP 0913826 A1 19990506 (EN)**

Application

**EP 97308765 A 19971031**

Priority

EP 97308765 A 19971031

Abstract (en)

A method of redundancy coding of user data received from a host apparatus and storage of said coded data on a magnetic tape data storage medium comprises inputting a byte stream of user data into a buffer and assembling a plurality of data sets in the buffer; for each data set assembling a data set into a two-dimensional data array and (1103) applying a second redundancy coding algorithm (C2 parity) to the two-dimensional data set in a second dimension; applying (1105) a first redundancy coding (C1 parity) algorithm to the second redundancy coded data array in a first dimension to form a two-dimensional data frame having second and first redundancy coding in respective second and first dimensions, the two-dimensional data frame comprising a plurality of rows, each row comprising a first codeword and a plurality of columns, each column comprising a second codeword; partitioning the two-dimensional data frame into a plurality of logical track blocks (1106) each comprising a plurality of first codewords; and recording (1110) each logical track block to a corresponding respective physical track on the magnetic tape data storage medium. Redundancy coding of a data frame is distributed across a plurality of other data frames along the tape, and redundancy bytes of each data frame are distributed across a plurality of data tracks. Redundancy coding may be distributed diagonally across a width of the tape. Data obliterated due to damage to individual physical recorded tracks or sections of tracks on the tape may be recovered from redundant coding data distributed across other adjacent parallel physical tracks on the tape. <IMAGE>

IPC 1-7

**G11B 20/18**

IPC 8 full level

**G06F 11/10** (2006.01); **G11B 20/12** (2006.01); **G11B 20/18** (2006.01)

CPC (source: EP US)

**G11B 20/12** (2013.01 - EP US); **G11B 20/1833** (2013.01 - EP US); **G11B 2220/916** (2013.01 - EP US)

Citation (search report)

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- [A] EP 0437865 A1 19910724 - PHILIPS NV [NL]
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- [A] IEEE TRANSACTIONS ON MAGNETICS, vol. 26, no. 5, September 1990 (1990-09-01), NEW YORK, pages 2152 - 2156, XP000150505

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